

10/718,190

GAU 3747

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (currently amended) Apparatus comprising:  
an internal combustion engine having a fueling system  
for fueling the engine;

one or more sources providing data relevant to  
operations of one or more systems of the apparatus that are  
external to the engine but potentially influential on  
fueling of the engine; and

an engine control system comprising a processor for  
processing data according to an all-speed governing  
strategy for controlling the fueling system to develop all-  
speed governed fueling data that sets engine fueling when a  
data input to the engine control system from the one or  
more sources discloses no need to influence engine fueling,  
but when the data input from such one or more sources  
discloses a need to influence engine fueling, that data  
input causes engine fueling to be set by a strategy other  
than the all-speed governing strategy.

2. (currently amended) Apparatus as set forth in Claim  
1 wherein the apparatus comprises a wheeled land vehicle  
that is propelled by the engine, and the one or more

10/718,190

GAU 3747

sources provide data relevant to operations of ~~comprise~~ one or more systems that act on wheels of the land vehicle.

3. (currently amended) Apparatus as set forth in Claim 2 wherein the one or more sources provide data relevant to operations of ~~comprise~~ one or more of: an ABS system; a traction control system; and a transmission through which the engine drives driven ones of the wheels of the vehicle.

4. (original) Apparatus as set forth in Claim 1 wherein the control system comprises functions for placing the other strategy in an enabled state when the data values for one set of inputs indicate the existence of conditions appropriate for the other strategy to influence engine fueling and for placing the other strategy in an unenabled state when the data values for another set of inputs indicate the existence of conditions inappropriate for the other strategy to influence engine fueling.

5. (original) Apparatus as set forth in Claim 4 wherein the one set of inputs includes engine speed.

6. (original) Apparatus as set forth in Claim 4 wherein the one set of inputs includes engine torque requested from one of the one or more sources and torque requested by the all-speed governing strategy.

7. (original) Apparatus as set forth in Claim 6 wherein the one set of inputs includes engine speed.

8. (original) Apparatus as set forth in Claim 4 wherein the other set of inputs includes engine speed and

10/718,190

GAU 3747

engine low idle speed, engine torque requested from one of the one or more sources, and torque requested by the all-speed-governing strategy.

9. (original) Apparatus as set forth in Claim 4 wherein the other strategy includes a momentary overspeed control portion that, when the other strategy is enabled, is effective to allow engine speed to exceed high idle speed for a limited time.

10. (original) Apparatus as set forth in Claim 9 wherein inputs to the momentary overspeed control portion include engine speed, engine high idle speed, a maximum speed limit, and a maximum time limit.

11. (original) Apparatus as set forth in Claim 1 wherein with the strategy other than the all-speed governing strategy influencing engine fueling, that other strategy functions to detect incipient engine stalling and change engine fueling to avoid actual stalling.

12. (original) Apparatus as set forth in Claim 1 wherein the strategy other than the all-speed governing strategy influencing engine fueling comprises a torque speed control strategy influencing engine fueling to influence engine torque.

13. (original) Apparatus as set forth in Claim 12 wherein the torque speed control strategy influencing engine fueling to influence engine torque comprises influencing engine fueling to create desired engine torque.

10/718,190

GAU 3747

14. (original) Apparatus as set forth in Claim 12 wherein the torque speed control strategy influencing engine fueling to influence engine torque comprises influencing engine fueling to impose a limit on engine torque.

15. (original) Apparatus as set forth in Claim 1 wherein the data from the one or more sources comprises messages that include data indicative of message priority, and the processor processes the priority data in the messages according to an algorithm that prioritizes the messages.

16. (currently amended) An engine control system for apparatus that includes an internal combustion engine having a fueling system for fueling the engine and one or more sources providing data relevant to operations of one or more systems of the apparatus that are external to the engine but potentially influential on fueling of the engine, the engine control system comprising:

a processor for processing data according to an all-speed governing strategy for controlling the fueling system to develop all-speed governed fueling data that sets engine fueling when a data input to the engine control system from the one or more sources discloses no need to influence engine fueling, but when the data input from such one or more sources discloses a need to influence engine fueling, that data input causes engine fueling to be set by a strategy other than the all-speed governing strategy.

17. (original) An engine control system as set forth in Claim 16 comprising functions for placing the other

10/718,190

GAU 3747

strategy in an enabled state when the data values for one set of inputs indicate the existence of conditions appropriate for the other strategy to influence engine fueling and for placing the other strategy in an unenabled state when the data values for another set of inputs indicate the existence of conditions inappropriate for the other strategy to influence engine fueling.

18. (original) An engine control system as set forth in Claim 17 wherein the one set of inputs includes engine speed.

19. (original) An engine control system as set forth in Claim 17 wherein the one set of inputs includes engine torque requested from one of the one or more sources and torque requested by the all-speed governing strategy.

20. (original) An engine control system as set forth in Claim 19 wherein the one set of inputs includes engine speed.

21. (original) An engine control system as set forth in Claim 17 wherein the other set of inputs includes engine speed and engine low idle speed, engine torque requested from one of the one or more sources, and torque requested by the all-speed-governing strategy.

22. (original) An engine control system as set forth in Claim 17 wherein the other strategy includes a momentary overspeed control portion that, when the other strategy is enabled, is effective to allow engine speed to exceed high idle speed for a limited time.

10/718,190

GAU 3747

23. (original) An engine control system as set forth in Claim 22 wherein inputs to the momentary overspeed control portion include engine speed, engine high idle speed, a maximum speed limit, and a maximum time limit.

24. (original) An engine control system as set forth in Claim 16 wherein with the strategy other than the all-speed governing strategy influencing engine fueling, that other strategy functions to detect incipient engine stalling and change engine fueling to avoid actual stalling.

25. (currently amended) An engine control system as set forth in Claim 16 ~~15~~ wherein the strategy other than the all-speed governing strategy influencing engine fueling comprises a torque speed control strategy influencing engine fueling to influence engine torque.

26. (original) An engine control system as set forth in Claim 25 wherein the torque speed control strategy influencing engine fueling to influence engine torque comprises influencing engine fueling to create desired engine torque.

27. (original) An engine control system as set forth in Claim 25 wherein the torque speed control strategy influencing engine fueling to influence engine torque comprises influencing engine fueling to impose a limit on engine torque.

28. (original) A motor vehicle comprising:

10/718,190

GAU 3747

an internal combustion engine having a fueling system for fueling the engine;

one or more sources providing data relevant to operations of the vehicle that are external to the engine but potentially influential on fueling of the engine; and

an engine control system comprising a processor for processing data according to an all-speed governing strategy for controlling the fueling system to develop all-speed governed fueling data that sets engine fueling when a data input to the engine control system from the one or more sources discloses no need to influence engine fueling, but when the data input from such one or more sources discloses a need to influence engine fueling, that data input causes engine fueling to be set by a strategy other than the all-speed governing strategy.

29. (original) A motor vehicle as set forth in Claim 28 wherein the vehicle comprises a transmission that is directly coupled to the engine for propelling the vehicle through a drivetrain ending at driven ones of wheels of the vehicle, and the one or more sources comprise one or more systems that act on at least some of wheels.

30. (original) A motor vehicle as set forth in Claim 29 wherein the one or more sources comprise one or more of: an ABS system; a traction control system; and the transmission.

31. (original) A motor vehicle as set forth in Claim 28 wherein the control system comprises functions for placing the other strategy in an enabled state when the data values for one set of inputs indicate the existence of

10/718,190

GAU 3747

conditions appropriate for the other strategy to influence engine fueling and for placing the other strategy in an unenabled state when the data values for another set of inputs indicate the existence of conditions inappropriate for the other strategy to influence engine fueling.

32. (original) A motor vehicle as set forth in Claim 31 wherein the one set of inputs includes engine speed.

33. (original) A motor vehicle as set forth in Claim 31 wherein the one set of inputs includes engine torque requested from one of the one or more sources and torque requested by the all-speed-governing strategy.

34. (original) A motor vehicle as set forth in Claim 33 wherein the one set of inputs includes engine speed.

35. (original) A motor vehicle as set forth in Claim 31 wherein the other set of inputs includes engine speed and engine low idle speed, engine torque requested from one of the one or more sources, and torque requested by the all-speed governing strategy.

36. (original) A motor vehicle as set forth in Claim 31 wherein the other strategy includes a momentary overspeed control portion that, when the other strategy is enabled, is effective to allow engine speed to exceed high idle speed for a limited time.

37. (original) A motor vehicle as set forth in Claim 36 wherein inputs to the momentary overspeed control



10/718,190

GAU 3747

portion include engine speed, engine high idle speed, a maximum speed limit, and a maximum time limit.

38. (original) A motor vehicle as set forth in Claim 28 wherein with the strategy other than the all-speed governing strategy influencing engine fueling, that other strategy functions to detect incipient engine stalling and change engine fueling to avoid actual stalling.

39. (original) A motor vehicle as set forth in Claim 28 wherein the strategy other than the all-speed governing strategy influencing engine fueling comprises a torque speed control strategy influencing engine fueling to influence engine torque.

40. (original) A motor vehicle as set forth in Claim 39 wherein the torque speed control strategy influencing engine fueling to influence engine torque comprises influencing engine fueling to create desired engine torque.

41. (original) A motor vehicle as set forth in Claim 39 wherein the torque speed control strategy influencing engine fueling to influence engine torque comprises influencing engine fueling to impose a limit on engine torque.

42. (original) A motor vehicle as set forth in Claim 28 wherein the data from the one or more sources comprises messages that include data indicative of message priority, and the processor processes the priority data in the messages according to an algorithm that prioritizes the messages.

10/718,190

GAU 3747

43. (original) A method for control of an internal combustion engine having a fueling system that in one mode of operation is under control of an accelerator position sensor free of influence from certain other external sources and in another mode of operation is influenced by one or more of those external sources, the method comprising:

when the engine is operating in the one mode, processing data according to an all-speed governing strategy to set desired engine fueling; and

when the engine is operating in another mode, processing data according a strategy other than the all-speed governing strategy to set desired engine fueling.

44. (original) A method as set forth in Claim 43 wherein the strategy other than the all-speed governing strategy comprises a torque speed control strategy to set engine fueling for setting engine torque.

45. (original) A method as set forth in Claim 44 wherein the torque speed control strategy comprises setting engine fueling to create desired engine torque.

46. (original) A method as set forth in Claim 44 wherein the torque speed control strategy comprises setting engine fueling to impose a limit on engine torque.